

1. a) Graph the line that has an equation of the form $y = x$.

b) Then, write an equation that runs perpendicular to $y = x$ and passes through the point $(0, 5)$.

c) Add this new line to your graph.

2. What is the slope of the following linear equation?

$$Ax + By = C \text{ (Hint: Solve for } y\text{)}$$

3. Write an equation in slope-intercept form of the line that passes through $(1, 3)$ and $(4, -4)$.

$$2) Ax + By = C$$

$$By = C - Ax$$

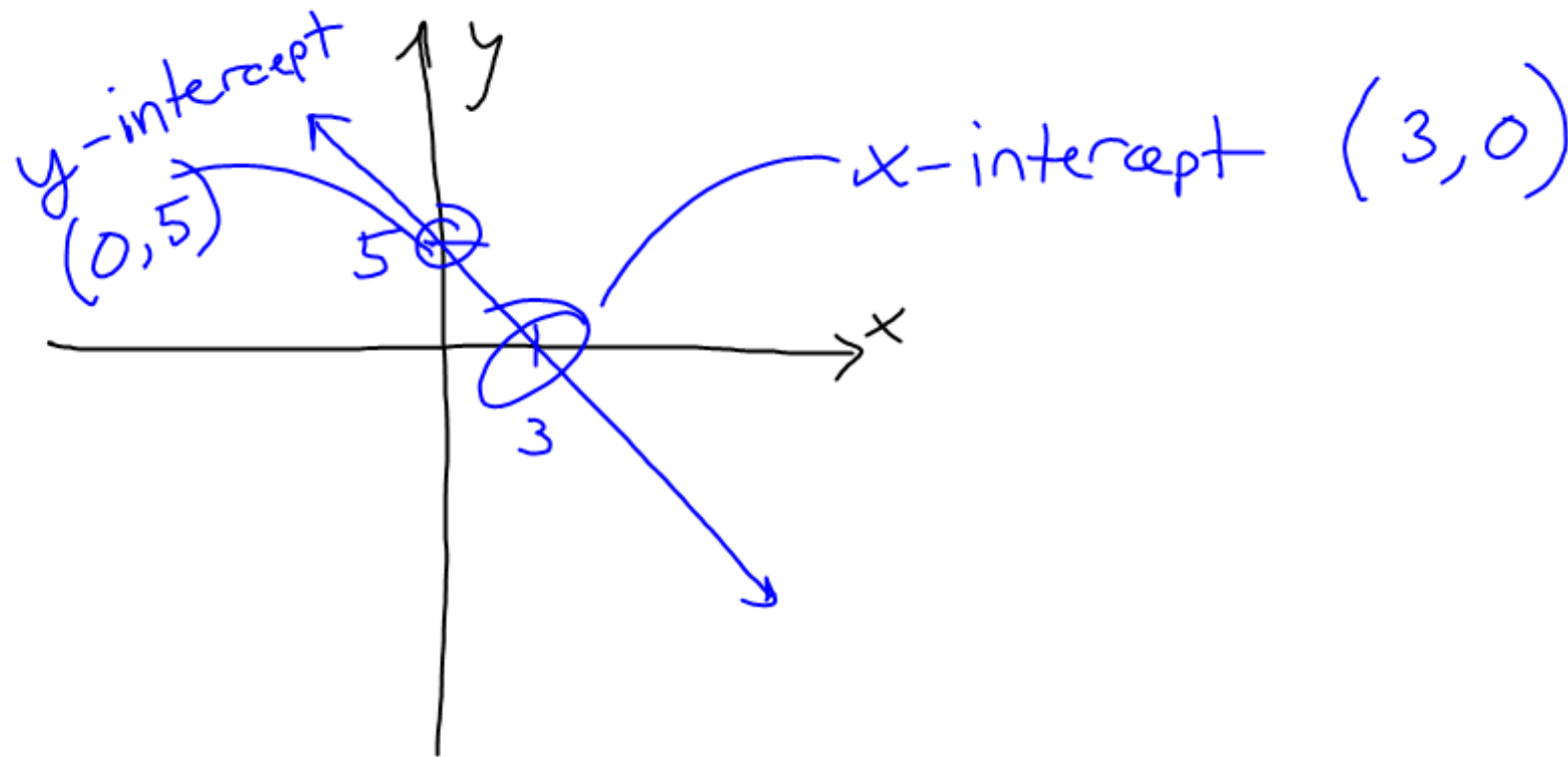
$$y = \frac{C}{B} - \frac{Ax}{B}$$

$$y = \boxed{-\frac{A}{B}}x + \frac{C}{B}$$

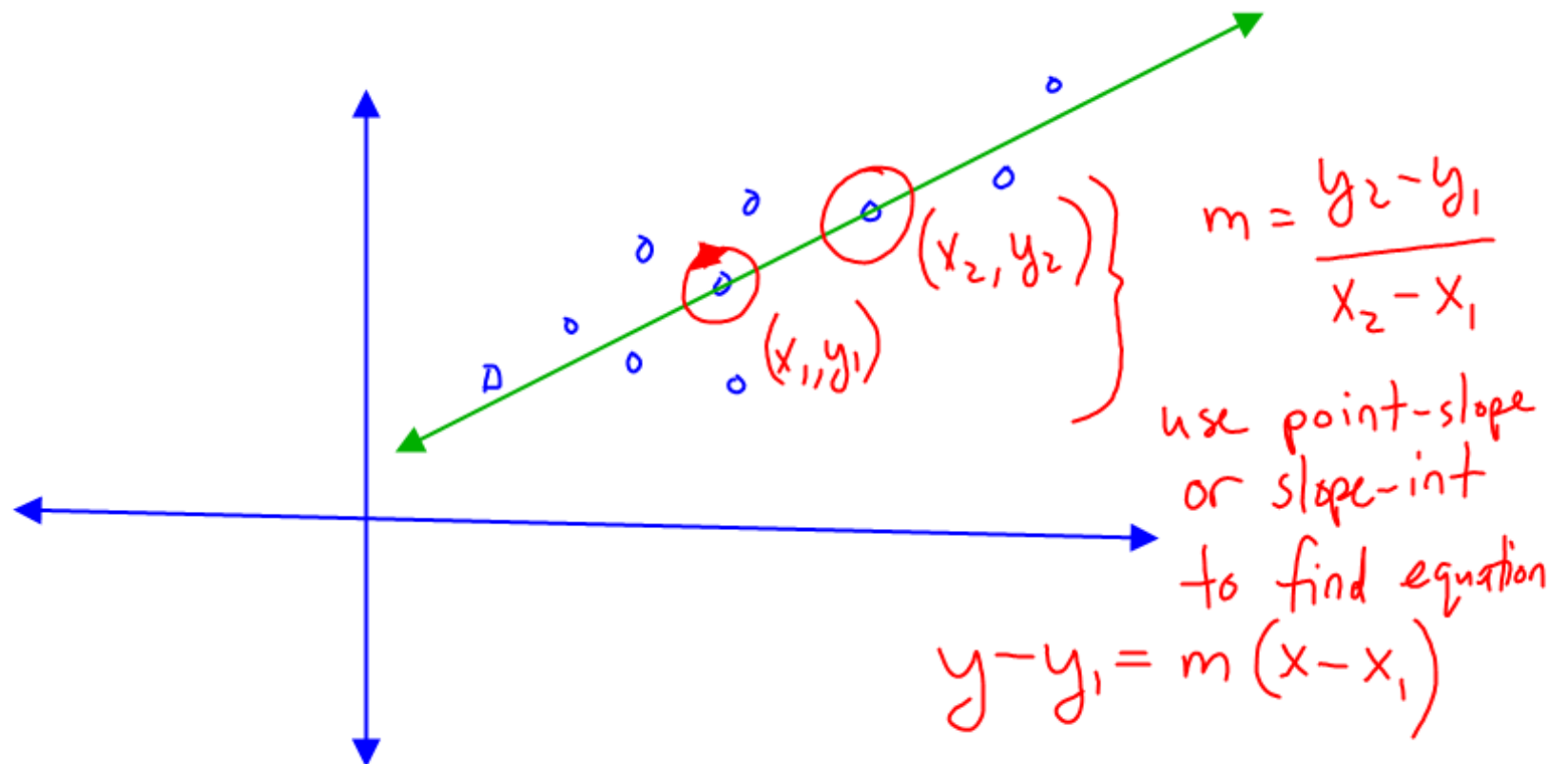
↳ slope

$$\begin{aligned}
 3. \quad \frac{-4-3}{4-1} &= \frac{-7}{3} \quad \text{slope} = -2.3 \quad y = -2.3x + b \\
 (1, 3) \quad (3) &= -2.3(1) + b \\
 3 &= -2.3 + b \\
 +2.3 \quad +2.3 & \quad \rightarrow \boxed{y = -2.3x + 5.3} \\
 b &= 5.3
 \end{aligned}$$

$$(1, 3) \quad (4, -4)$$



Shortcut to fit all data on
graph zoom 9



HW: p. 81: 7, 27
p. 109: 11, 12, 16, 19